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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,121	07/28/2003	Roger Pruitt	S604-J	5906

7590 06/27/2005
Bruce A. Jagger
BRUNTON & JAGGER
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Glendale, CA 91209-9000

EXAMINER

JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,121	PRUITT, ROGER	
	Examiner	Art Unit	
	Chen-Wen Jiang	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12-22, 24, 25, 27-38, 40-43 and 45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 6-10, 12-14, 30-33, 42, 43 and 45 is/are allowed.
- 6) ☒ Claim(s) 1-3, 15-22, 24, 25, 27-29, 34-38, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20030728</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Yaeger et al. (U.S. Patent Number 5,408,838) and further in view of Shum (U.S. Patent Number 4,658,597).

Vaughan discloses an environmental control system for regulating humidity and temperature. Figs. 6, 8 and 9 are not applied in this office action. Referring to Figs. 1 and 7, cooling is accomplished by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14, 18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. The first controllable vent 28 is closed, while the second controllable vent 30 is opened so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14, 18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14, 18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually

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movable hinged plate 38 defining an auxiliary inlet in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. In regard to claim 34, Applicant should note the selection of available power source is a design choice within the skill of prior art (e.g., Shum). In regard to claims 36-38, the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses the dry side flow and wet side flow are delivered to the interior and does not disclose these two flows combined first and then deliver to the interior. Yaeger et al. disclose two streams can be combined first (Fig.3) in the analogous art of deliver the combined flow for the purpose of delivering conditioned flow. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with mixed streams first in view of Yaeger et al. so as to deliver combined flow. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

3. Claims 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Schlom et al. (U.S. Patent Number 4,137,058) and further in view of Shum (U.S. Patent Number 4,658,597).

Vaughan discloses an environmental control system for regulating humidity and temperature. Figs. 6, 8 and 9 are not applied in this office action. Referring to Figs. 1 and 7, cooling is accomplished by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14, 18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. The first controllable vent 28 is closed, while the second controllable vent 30 is opened so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14, 18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14, 18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. In regard to claim 34, Applicant should note the selection of available power source is a design choice within the skill of prior art (e.g., Shum). In regard to claims 36-38, the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses the dry side flow and wet side flow are delivered to the interior

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and does not disclose these two flows combined first and then deliver to the interior. Schlom et al. disclose two streams can be combined in a confined space 127 (Fig.4) in the same field of endeavor for the purpose of combined flows. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with a combined flow in view of Schlom et al. so as to combine flows. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

4. Claims 1-3,15-19,20,28,29,40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Schlom et al. (U.S. Patent Number 4,137,058).

Vaughan discloses an environmental control system for regulating humidity and temperature. Figs.6, 8 and 9 are not applied in this office action. Referring to Figs.1 and 7, cooling is accomplishing by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. The first controllable vent 28 is closed, while the second controllable vent 30 is opened so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the

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moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. Vaughan discloses the dry side flow and wet side flow are delivered to the interior and does not disclose these two flows combined first and then deliver to the interior. Schlom et al. disclose two streams can be combined first (Fig.4) in the same field of endeavor for the purpose of combined flows. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with a combined space in view of Schlom et al. so as to combine flows. In regard to Applicant's arguments about the "essential" that the output from the wet side be free of dissolved salts or the like". It is noted that the teaching is the two streams can be combined after the pre-cooler. The usage (for compressor, that is the purpose of 'essential') and the detail limitations of the pre-cooler are not in the teachings. In regard to the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses an apparatus satisfying the structural requirements of the claimed and capable to perform claimed conditioned air in the claimed environment. The disclosed apparatus also enjoys the same utility as that claimed. The

level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

5. Claims 21,22,24,25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Schlom et al. (U.S. Patent Number 4,137,058) and further in view of Curtis (U.S. Patent Number 4,674,295).

Vaughan discloses an environmental control system for regulating humidity and temperature. Figs.6, 8 and 9 are not applied in this office action. Referring to Figs.1 and 7, cooling is accomplishing by actuating the blower 20 in the dry air flow path so that air from the confined volume flows through the first group of tubes 14, through the plenum chamber 16 and through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. The first controllable vent 28 is closed, while the second controllable vent 30 is opened so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature

and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. However, Vaughan does not disclose supply wet and dry air discharge into conduit and combined in a location remote from the dry side and also does not disclose plurality wet side blowers. Schlom et al. disclose two streams can be combined in a remote location 127 (Fig.4) in the same field of endeavor for the purpose of combined flows. In regard to Applicant's arguments about the "essential" that the output from the wet side be free of dissolved salts or the like". It is noted that the teaching is the two streams can be combined after the pre-cooler. The usage (for compressor, that is the purpose of 'essential') and the detail limitations of the pre-cooler are not in the teachings. Curtis discloses plurality blowers for wet side inlets. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with a blowers and conduit in view of Schlom et al. and Curtis so as to deliver flows. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The utility is capable to place an object in heat exchanging relationship with the water source.

6. Claims 1-3,15-19,20,28,29,40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (U.S. Patent Number 4,090,370) in view of Yaeger et al. (U.S. Patent Number 5,408,838).

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through the second group of tubes 18. The water pump 52 is actuated to spray water in the evaporation path and on the padding 32 surrounding the tubes 14,18, and the axial-centrifugal blower 26 is turned on to direct air through the evaporation flow path. The first controllable vent 28 is closed, while the second controllable vent 30 is opened so that humidified air from the evaporation flow path is expelled to the confined volumetric region. As air passed across the moistened tubes 14,18, the water in the padding 32, as well as some of the water spray, evaporates, chilling the padding 32 surrounding the tubes 14,18. Heat exchanged between the interior and exterior of the tubes chills the dry flow path air within the tubes which is expelled from the outlet chamber to the confined volumetric region. The inlet duct 34 has a manually movable hinged plate 38 defining an auxiliary inlet in which the plate 38 is extended in an open position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. Vaughan discloses the dry side flow and wet side flow are delivered to the interior and does not disclose these two flows combined first and then deliver to the interior. Yaeger et al. disclose two streams can be combined first (Fig.3) in the analogous art of deliver the combined flow for the purpose of delivering conditioned flow. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with mixed streams first in view of Yaeger et al. so as to deliver combined flow. In regard to the selection of temperature, humidity and timer, Applicant should note these are the user's choice and are not patentable. Vaughan discloses an apparatus satisfying the structural requirements of

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the claimed and capable to perform claimed conditioned air in the claimed environment. The disclosed apparatus also enjoys the same utility as that claimed. The level of the cooling and humidity do not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the *structural* limitations of that claimed. See *In re Pearson*, 494 F2d. 1399, 181 USPQ 641 (CCPA 1974).

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position. The auxiliary inlet, when open, allows recirculation of room air through the evaporation path (from plurality sources to wet side). A control unit 62 includes the high and low temperature and humidity sensors. A temperature and humidity responsive control unit is integrally coupled to selectively actuate the controllable vents, the blowers, the pump and the heating element. However, Vaughan does not disclose supply wet and dry air discharge into conduit and combined in a location remote from the dry side and also does not disclose plurality wet side blowers. Schlom et al. disclose two streams can be combined in a remote location 127 (Fig.4) in the same field of endeavor for the purpose of combined flows. In regard to Applicant's arguments about the "essential" that the output from the wet side be free of dissolved salts or the like". It is noted that the teaching is the two streams can be combined after the pre-cooler. The usage (for compressor, that is the purpose of 'essential') and the detail limitations of the pre-cooler are not in the teaching. Curtis discloses plurality blowers for wet side inlets. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Vaughan with a blowers and conduit in view of Schlom et al. and Curtis so as to deliver flows. Vaughan discloses an apparatus satisfying the structural requirements of the claimed. The disclosed apparatus also enjoys the same utility as that claimed. The utility is capable to place an object in heat exchanging relationship with the water source.

Allowable Subject Matter

8. Claims 4,6-10,12-14,30-33,42,43 and 45 are allowed.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Tuesday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, appearing to be 'C. Jiang', written over a horizontal line.